11) IMPROVEMENTS TO ROADS AND DRAINS AT KODIGEHALLI WARD NO.08 (KODIGEHALLI), KODIGEHALLI SUB DIVISION

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BRUHAT BANGALORE MAHANAGARA PALIKE
PREPARATION OF DPR FOR PACKAGE NO. 03
(PACKAGE CONSISTS OF 21 WORKS IN WARD NO 08 AND WARD NO 09)
IMPROVEMENTS TO ROADS AND DRAINS AT KODIGEHALLI WARD NO.08

Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
1	KSRRB M200-12.2. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. i) Lime /Cement Concrete. I. By Manual Means :B. Cement Concrete Grade M-15 & M-20. MORTH Specification No. 202. (P.No. 136, I.No. 18.18 of CSR 2015-16) (P.No.137, I.No.18.27 of PW,P&IWTD SR 2015-16)								
	culvert extension		2.00	0.50	6.00	0.35	2.10		
	Basic rate							374	
	Area weightage 6%							22.44	
	Loading & Unloading charges							116.75	
							2.10	**513.19**	**1077.70**
2	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Dr Rajgopal road kodigehalli	Cum							
	from 2nd cross ch 0-135		2	135	1.10	1.0	294.03		
	ch 140-190		2	50	1.10	1.0	108.90		
	Culvert		5	6.50	1.60	1.4	70.72		
	culvert extension		2.00	4.00	6.70	2.0	105.06		
	Basic rate							82.00	
	Area weightage 6%							4.92	
							578.71	**86.92**	**50301.13**
3	Lead for disposal of earth shall be payable at Carriage rates (Lead & Lift) by mechanical means including loading and unloading up to 15kms.(Refer Table. Page No.139)								
	Considered same Qty vide I.No.2+I.No.18	Cum					1256.31		
	Average Weight of Earth (1.28 Ton/cum, Basic rate Rs.2.00 Tonne/Km.) For 15 Kms = (2.50 x 1.28 x 15)/-		48						
	KSRRB M100-1 Add loading & unloading (P.No.130,I.No.17.1)		68						
	Total rate per Cum		116						
	Basic rate							116.00	
	Area weightage 6%							6.96	
							1256.306	**122.96**	**154475.39**
4	KSRRB M300- Construction of Embankment with Material Gravel/ Murrum. KSRRB M300-53. Construction of embankment with approved material Gravel/Murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement Table 300- 2 complete as per specifications.(Including cost of gravel / murrum, watering charges & compaction by vibratory roller to 95% of proctors density) MORTH Specification No. 305 (P.No.147, I.No.19.60 of PW,P&IWTD S.R 2016-17)								
	Dr Rajgopal road kodigehalli								
	from 2nd cross ch 0-135		2	135	0.80	0.60	129.60		
	ch 140-190		2	50	0.80	0.60	48.00		
	Basic rate							302.00	
	Area weightage 6%							18.12	
							177.60	**320.12**	**56853.31**
5	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)								
	Bed Concrete	Cum							
	Dr Rajgopal road kodigehalli								

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	from 2nd cross ch 0-135		2	135	1.1	0.15	44.55		
	ch 140-190		2	50	1.1	0.15	16.50		
	Culvert		5	6.5	1.6	0.15	7.80		
	culvert extension		2	4	6.7	0.15	8.04		
	Basic rate							5046.00	
	Area weightage 6%							302.76	
							76.89	**5348.76**	**411266.16**
6	Providing laying plain/ reinforced cement concrete M20 Grade for Box Drain walls of thickness 10cm to 20cm including centering shuttering for work etc. complete as per approved drawing and design MORTH specification No. 1500, 1700, 2200. (P.No.265, I.No.37.59.2 of PW, P&IWTD SR 2016-17)								
	Bottom Raft	Cum							
	Dr Rajgopal road kodigehalli								
	from 2nd cross ch 0-135		2.00	135.00	0.90	0.15	36.45		
	ch 140-190		2.00	50.00	0.90	0.15	13.50		
	Culvert		5.00	6.50	1.40	0.25	11.38		
	Walls								
	from 2nd cross ch 0-135		4.00	135.00	0.15	0.80	64.80		
	ch 140-190		4.00	50.00	0.15	0.80	24.00		
	Culvert		10.00	6.50	0.25	1.00	16.25		
	Basic rate							10408.00	
	Area weightage 6%							624.48	
							166.38	**11032.48**	**1835528.86**
7	KSRB - 4.9.2: Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, palcing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining memebrs wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3. (P.No.17, I.No.4.46.3 of PW, P&IWTD SR 2016-17)								
	Consider 50Kgs/cum for Drain	Tonne		138.75	0.050	--	6.94		
	Consider 80Kgs/cum for Culvert	Tonne		27.63	0.080	--	2.21		
	Basic rate							60607.00	
	Area weightage 6%							3636.42	
							9.15	**64243.42**	**587827.29**
8	Providing and fixing **RCC Precast cover slab of 100mm thick** for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
	Cover Slab	Sqm					243.00		
	from 2nd cross ch 0-135		2.00	135.00	0.90	--	90.00		
	ch 140-190		2.00	50.00	0.90	--	**333.00**	1738.00	**578754.00**
9	Providing and fixing **RCC Precast cover slab of 250mm thick** for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
	Cuivert		5.00	6.50	1.50	--	48.75		
							48.75	4951.00	**241361.25**
10	Providing and fixing Pre cast solid concrete kerb stones made out of CC 1:2:4 with top and bottom width 114 and 165mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting, including formwork, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc., complete (P.No.25, I.No.5.30 of PW,P&IWTD S.R 2016-17)								
	For Road Kerb	No.				/0.45	600.00		
	from 2nd cross ch 0-135		2.00	135.00	--	/0.45	222.00		
	ch 140-190		2.00	50.00	--			313.00	
	Basic rate							18.78	
	Area weightage 6%						**822.00**	**331.78**	**272723.16**
11	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8 (P.No.182, I.No. 24.1 of PW,P&IWTD SR 2016-17)								
	For Kerb Painting	Sqm							

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	from 2nd cross ch 0-135		2	135.00		0.35	94.50		
	ch 140-190		2	50.00	--	0.35	35.00		
	Basic rate							60.00	
	Area weightage 6%							3.60	
							129.50	63.60	8236.20
12	KSRB 5.2-3: Providing and constructing granite size stone masonry in foundation cement mortor 1:6, stone hammered dressed in courses not less than 20cms high, bond stones at 2m. apart in each course including cost of materaials, labour, curing complete as per specifications. Specifcation No. KBS 5.1.13. (P.No.23, I.No.5.6 of PW, P&IWTD S.R 2016-17)								
	SSM Wall	Cum							
	culvert extension		4.00	4.00	0.60	2.00	19.20		
	Basic rate							4187.00	
	Area weightage 6%							251.22	
							19.20	4438.22	85213.824
13	KSRB 15.1.1 Providing flush pointing to square rubble, course or uncoursed stone masonry with cement mortar 1:3, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications. (P.No.113, I.No.15.1 of PW, P&IWTD S.R 2016-17)								
	SSM Wall	Sqm							
	culvert extension		4.00	4.00	--	2.00	32.00		
	Basic rate							97.00	
	Area weightage 6%							5.82	
							32.00	102.82	3290.24
14	KSRB 4-1.6: Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.6 of PW,P&IWTD S.R 2016-17)								
	Coping	Cum							
	culvert extension		4.00	4.00	0.60	0.10	0.96		
	Basic rate							5441.00	
	Area weightage 6%							326.46	
							0.96	5767.46	5536.76
15	KSRRB M2300-8.1. Furnishing and Placing Reinforced/ Prestressed cement concrete in super-structure as per drawing and Technical Specification complete as per specifications. D. RCC / PSC with OPC cement design mix M35 @ 390kgs, with 20mm and down size graded granite metal coarse aggregates @0.68cum and fine aggregates @ 0.45cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008, Case - II : Using Batching Plant, Transit Mixer & Concrete Pump MORTH Specification No. 1500,1600 & 1700-Height upto 5 m(P.No.226 , I.No.29.16.1 of PW,P&IWTD S.R S.R 2016-17)								
	culvert extension								
	Top Slab	Cum	2	4.60	6.70	0.35	21.57		
	Approach slab		2	3.50	4.00	0.30	8.40		
	Basic rate							6965.00	
	Area weightage 6%							417.90	
							29.97	7382.90	221295.04
16	KSRRB M2200 -6 Supplying , fitting and placingTMT bar Fe 550 reinforcement in sub-structure complete as per drawing & technical specification complete as per the specification . MORTH Specification No.1600 & 2200(P.No.218 , I.No.28.8.3 of PW,P&IWTD S.R 2016-17)								
	Consider 135kg/cum for Bridge portion	Tonne		29.97	--	0.135	4.05		
	Basic rate							63401.00	
	Area weightage 6%							3804.06	
							4.05	67205.06	272180.49
17	KSRRB 300-50. Scarifying bituminous course 50mm to 75mm thick along with premix carpet / surface dressing by road roller attached with scarifier without disturbing the base and stacking the debris including cost of all labour charges, HOM of machineries complete as per specifications. MORTH / Chapter 3(P.No.147, I.No.19.56 of PW,P&IWTD S.R 2016-17)								
	Road Portion								
	from 2nd cross ch 0-135		1.00	135.00	6.90	--	931.50		
	ch 140-190		1.00	50.00	7.80	--	390.00		
	Basic rate							29.00	
	Area weightage 6%							1.74	
							1321.50	30.74	40622.91

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18	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	widening portion	Cum							
	from 2nd cross ch 0-135		2	135.00	4.70	0.40	507.60		
	ch 140-190		2	50.00	4.25	0.40	170.00		
	Basic rate							46.00	
	Area weightage 6%							2.76	
							677.60	**48.76**	**33039.78**
19	KSRRB M400-6.1. Construction of granular sub-base by providing close graded crushed stone aggregates of granite / trap / basalt material, mixing in a mechaical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications. A. Plant Mix Method. - For Grading II Materiall(P.No.155, I.No.20.4.2 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	from 2nd cross ch 0-135		2	135.00	4.70	0.15	190.35		
	ch 140-190		2	50.00	4.25	0.15	63.75		
	Basic rate							1571.00	
	Area weightage 6%							94.26	
							254.10	**1665.26**	**423142.57**
20	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	widening portion	Cum							
	from 2nd cross ch 0-135		1	135.00	6.90	0.23	214.25		
	ch 140-190		1	50.00	7.80	0.23	89.70		
	widening portion		2	135.00	4.70	0.25	317.25		
			2	50.00	4.25	0.25	106.25		
	Basic rate							1668.00	
	Area weightage 6%							100.08	
							727.45	**1768.08**	**1286180.96**
21	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	widening portion	Cum							
	from 2nd cross ch 0-135		1	135.00	6.90	--	931.50		
	ch 140-190		1	50.00	7.80	--	390.00		
			2	135.00	4.70	--	1269.00		
			2	50.00	4.25	--	425.00		
	Basic rate							26.00	
	Area weightage 6%							1.56	
							3015.50	**27.56**	**83107.18**
22	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	Dr Rajgopal road kodigehalli	Sqm							
	For Laying DBM								
	from 2nd cross ch 0-135		1	135.00	16.30	--	2200.50		
	ch 140-190		1	50.00	16.30	--	815.00		
	For Laying BC								
	from 2nd cross ch 0-135		1	135	16.30	--	2200.50		
	ch 140-190		1	50	16.30	--	815.00		
	Basic rate							12.00	
	Area weightage 6%							0.72	
							6031.00	**12.72**	**76714.32**

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23	KSRRB M500-17. Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications.. MORTH Specification No. 507 - using 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen (P.No.163 of I.No.21.17.6 in PW,P&IWTD S.R 2016-17)								
	For Laying DBM	Cum							
	from 2nd cross ch 0-135		1	135.00	16.30	0.05	110.03		
	ch 140-190		1	50.00	16.30	0.05	40.75		
	Basic rate							6717.00	
	Area weightage 6%							403.02	
							150.78	**7120.02**	**1073521.02**
24	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	Dr Rajgopal road kodigehalli	Cum							
	from 2nd cross ch 0-135		1	135.00	16.30	0.04	88.02		
	ch 140-190		1	50.00	16.30	0.04	32.60		
	Basic rate							7659.00	
	Area weightage 6%							459.54	
							120.62	**8118.54**	**979258.29**
25	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Centre line	Sqm	0.5	185.00	0.15	–	13.88		
	Edge line	Sqm	2	185.00	0.15	–	55.50		
	Basic rate							512.00	
	Area weightage 6%							30.72	
							69.38	**542.72**	**37651.20**
								Sub Total	**8819159.030**
								Preperation of DPR And Project management Consultancy Charges(2% of estimated cost)	180000
								Miscellaneous and rounding off	840.97
								Total	**9000000.00**
									RUPEES NINETY LAKHS ONLY

Certificate.

1 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2 The provisions made in the estimate are necessary and essential.
3 The workspot was inspected and work is found to be necessary.
4 The area comes within the Bruhat Bangalore Mahanagara Palike limits.

Assistant Executive Engineer,
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.,
Bangalore.

Executive Engineer
Byatarayanapura Division
Yelahanka Zone, B.B.M.P.
Bangalore-560092

Technical Sanction
Rs 90.00 lakhs only
P3158
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